

WEST Search History

DATE: Tuesday, October 26, 2004

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<input type="checkbox"/>	L23	metal-antibody conjugate	72
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L23: Entry 70 of 72

File: DWPI

Mar 5, 1986

DERWENT-ACC-NO: 1986-063444

DERWENT-WEEK: 198610

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TITLE: New metal-antibody complexes - formed from covalent conjugate of antibody and chelatin agentINVENTOR: ALVAREZ, V L; GOERS, J W F ; LEE, C ; MCKEARN, T J ; RODWELL, J D ; SIEGEL, R C ;
GOERS, J W

PATENT-ASSIGNEE:

ASSIGNEE

CODE

CYTOGEN CORP

CYTON

PRIORITY-DATA: 1984US-0646328 (August 31, 1984), 1982US-0356315 (March 9, 1982), 1982US-04420
(November 16, 1982), 1984US-0646327 (August 31, 1984)[Search Selected](#)[Search ALL](#)[Clear](#)

PATENT-FAMILY:

	PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
<input type="checkbox"/>	EP 173629 A	March 5, 1986	E	063	
<input type="checkbox"/>	AU 8547701 A	March 24, 1986		000	
<input type="checkbox"/>	CA 1260827 A	September 26, 1989		000	
<input type="checkbox"/>	DE 3586188 G	July 16, 1992		000	G01N033/534
<input type="checkbox"/>	DK 8601951 A	April 29, 1986		000	
<input type="checkbox"/>	EP 173629 B1	June 10, 1992	E	030	G01N033/534
<input type="checkbox"/>	JP 06234800 A	August 23, 1994		018	C07K015/22
<input type="checkbox"/>	JP 62500119 W	January 16, 1987		000	
<input type="checkbox"/>	JP 94051720 B2	July 6, 1994		017	C07K015/12
<input type="checkbox"/>	JP 95033399 B2	April 12, 1995		017	C07K016/00
<input type="checkbox"/>	US 4741900 A	May 3, 1988		000	
<input type="checkbox"/>	WO 8601410 A	March 13, 1986	E	000	
<input type="checkbox"/>	ZA 8506358 A	February 21, 1987		000	

DESIGNATED-STATES: AT BE CH DE FR GB IT LI LU NL SE AT BE CH DE FR GB IT LI LU NL SE AU DK JP

CITED-DOCUMENTS:3.Jnl.Ref; DE 3239410 ; 2.Jnl.Ref ; US 4367309 ; US 4454106 ; US 4472509

h e b b g e e f c e h

e ge e g

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
EP 173629A	August 29, 1985	1985EP-0401695	
DE 3586188G	August 29, 1985	1985DE-3586188	
DE 3586188G	August 29, 1985	1985EP-0401695	
DE 3586188G		EP 173629	Based on
EP 173629B1	August 29, 1985	1985EP-0401695	
JP 06234800A	August 19, 1985	1985JP-0503820	Div ex
JP 06234800A	August 19, 1985	1993JP-0202208	
JP 62500119W	August 19, 1985	1985JP-0503820	
JP 94051720B2	August 19, 1985	1985JP-0503820	
JP 94051720B2	August 19, 1985	1985WO-US01556	
JP 94051720B2		JP 62500119	Based on
JP 94051720B2		WO 8601410	Based on
JP 95033399B2	August 19, 1985	1985JP-0503820	Div ex
JP 95033399B2	August 19, 1985	1993JP-0202208	
JP 95033399B2		JP 6234800	Based on
US 4741900A	August 31, 1984	1984US-0646328	
WO 8601410A	August 19, 1985	1985WO-US01556	
ZA 8506358A	August 21, 1985	1985ZA-0006358	

INT-CL (IPC): A23J 7/00; A61K 37/00; A61K 39/39; A61K 39/395; A61K 43/00; A61K 49/02; A61K 51/00; C07K 13/00; C07K 15/00 ; C07K 15/12; C07K 15/22; C07K 16/00; C12N 9/96; C12N 11/02; C1 1/58; G01N 33/53; G01N 33/534; G01N 33/577

RELATED-ACC-NO: 1983-766506;1986-083350 ;1987-334880 ;1988-347928

ABSTRACTED-PUB-NO: DE 3382572G

BASIC-ABSTRACT:

New metal complexes (I) comprises a metal ion co-ordination-bonded to a chelating agent in a novel conjugate (II) in which the chelating agent (III) is covalently bonded to an antibody or antibody fragment without affecting its immunoreactivity or immunospecificity, the covalent bond being located outside the antigen-binding region of the antibody or fragment.

USE - (I) are useful for delivering metal ions to target sites in vivo or in vitro, e.g. in immunoassays, for scintigraphic imaging of body tissues for tumour therapy.

ABSTRACTED-PUB-NO:

EP 88695B

EQUIVALENT-ABSTRACTS:

Prepn. of an antibody conjugate comprises (1) exposure of the antibody or its fragment direct against an antigenic site to an oxidising agent to form aldehyde gps. in the carbohydrate moiety of the antibody or its fragment; (2) reaction of the aldehyde gps. with a hydrazine, hydrazide or amine gp. of a cpd. to form the conjugate.

Antibody conjugate comprising a cpd. attached through a covalent bond to a carbohydrate moiety of an antibody, the conjugate retaining the immunoreactivity and immunospecificity of the antibody, is new.

Prepn. of a modified antibody comprises (1) binding of the antibody or its fragment to a seco

antibody directed against the Fab portion of the antibody or fragment to form an immune complex; (2) attachment of a peptide linker, amino acid linker or linker of formula (I) $W-(CH_2)_n-Q$ to the unbound portion of the antibody or its fragment, (W is $-NHCH_2$ or $-CH_2$; Q is an amino acid, peptide, chelator or chelator deriv.; and n is 0-20). Then (3) dissociation of the immune complex is used to release the modified antibody from the second antibody; and (4) separation of the 2 antibodies. This procedure may be modified, e.g. an initial reduction may be used to give an antibody or Fab' fragment having the same properties.

The antibody conjugates are useful in affinity purification procedures and separations; they are also useful in the usual diagnostic procedures and as carriers for therapeutic agents or for tumour imaging agents. With the substrate linker attached, the antibodies retain the ability to bind antigen and activate

A soluble antibody conjugate for a medical use comprising: a water-soluble therapeutic or diagnostic compound containing an amine group selected from the group consisting of secondary amine, hydrazine, hydrazide, hydroxylamine, phenylhydrazine and semicarbazide, attached through a covalent bond to an aldehyde group of an oxidized carbohydrate moiety of an antibody or antibody fragment said covalent bond between said amine group and said aldehyde group being an enamine, hydrazone, oxime, phenylhydrazone, semicarbazone or a reduced form thereof, and said soluble antibody conjugate having (i) substantially the same immunoreactivity and immunospecificity as the unconjugated antibody or antibody fragment and (ii) aqueous solubility, such that the conjugate is suitable for in vivo administration.

EP 173629A

EP 173629B

An antibody-chelator conjugate, comprising: a compatible chelator attached through a covalent bond to an antibody or antibody fragment and capable of coordinate bonding to a metal ion, in which the covalent bond is between an amine of the compatible chelator and an aldehyde group of an oxidized carbohydrate moiety of the antibody or antibody fragment, said antibody-chelator conjugate having substantially the same immunoreactivity and immunospecificity as the unconjugated antibody or antibody fragment, and wherein the covalent bond is (i) selectively formed at a site located outside the antigen binding region of the antibody or antibody fragment and (ii) selected from an amine, an enamine, hydrazone, oxime, phenylhydrazone, semicarbazone, thiosemicarbazone and a reduced form thereof.

US 4741900A

Preparation of an antibody-chelator conjugate comprises reacting an antibody (fragment) with an oxidising agent to form an aldehyde group in the carbohydrate moiety. The carbohydrate group is not part of nor directly involved with an antigen binding site. The aldehyde group is reacted with a chelator containing a primary amine, hydrazine, hydrazide, hydroxylamine, phenylhydrazine or (thio)semicarbazide group to form a water soluble antibody-chelator conjugate.

USE/ADVANTAGE - In therapy and diagnosis. The conjugate has the same immunospecificity as the unconjugated antibody (fragment) and aqueous solubility such that when reacted with metal ion, the conjugate is suitable for in vivo administration. The metal ion can be a radioisotope. (22pp)

CHOSEN-DRAWING: Dwg.0/5

TITLE-TERMS: NEW METAL ANTIBODY COMPLEX FORMING COVALENT CONJUGATE ANTIBODY CHELATE AGENT

DERWENT-CLASS: B04 D16 K08 S03

CPI-CODES: B04-B04C5; B05-A04; B06-A03; B10-A09B; B10-B01B; B10-C02; B12-G07; B12-K04; B12-K05-H09; K09-B; K09-E;

EPI-CODES: S03-E14H4;

h e b b g e e f c e h

e g e g

CHEMICAL-CODES:

Chemical Indexing M1 *01*

Fragmentation Code

A331 A349 A383 A421 A425 A426 A427 A764 A960 C710
C811 G010 G013 G100 H100 H101 H103 H141 H181 H182
H183 H401 H481 H498 H598 J0 J011 J012 J013 J014
J172 J173 J271 J3 J331 J341 J371 J372 J373 K431
K620 K630 K820 K840 L355 L410 L420 L431 L531 L532
M280 M311 M312 M313 M314 M321 M322 M323 M331 M332
M342 M343 M344 M349 M373 M381 M383 M391 M392 M393
M423 M510 M520 M530 M531 M532 M540 M620 M630 M710
M903 P210 P220 P241 P431 P433 P633 P831 Q233 Q444
Q504 V600 V611 V743 V901 V912

Chemical Indexing M6 *02*

Fragmentation Code

M903 P210 P220 P241 P431 P433 P633 P831 Q233 Q444
Q504 R306 R515 R614 R621 R626 R639

UNLINKED-DERWENT-REGISTRY-NUMBERS: 0793S

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C1986-027034

Non-CPI Secondary Accession Numbers: N1986-046423

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☐ L1 mrzochi 0

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<input type="checkbox"/>	L56	L55 and mammal	148
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